

eye, $10\frac{1}{4}$ in. Diameter of eye, $1\frac{1}{2}$ in. Front of eye to nostril, 3 in. Width of nostril, $1\frac{1}{4}$ in. Distance between inner margins of nostrils, $4\frac{3}{4}$ in. Mixopterygia, $7\frac{1}{4}$ in.

A fuller account of this specimen with photographs of the freshly-captured fish and figures of anatomical details will shortly be published.

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ON FISH-BONES IN A KINGFISHER'S NEST.

Through the kindness of Mr. S. H. Chubb of the American Museum the writer has had for examination a mass of fish-bones, scales, etc., from the recently occupied nest of a kingfisher, and has looked it through to determine the species of fish eaten in this case. The results have both an ichthyological and ornithological interest.

The nest referred to was placed in a bank about one-quarter of a mile from Van Cortlandt Lake, New York City. It was occupied by young kingfishers 29 days between the times of hatching and departure. Immediately after they had gone Mr. Chubb removed about two quarts of soil from the bottom of the nest, and from this about 220 cubic centimeters of clean bones, scales, etc., was obtained, representing probably three-quarters of all the fish remains in the nest.

The most striking single objects among the bones were the beautifully preserved tooth-bearing pharyngeals of small cyprinids, of which there were 113. The mass was carefully gone over for readily recognizable bones of other fishes and surprisingly few encountered. Lower jaw bones of 2 or 3 small pickerel (*Esox*), 3 to 5 inches in length, were noted; also the opercle of a yellow perch (*Perca flavescens*), about

four inches, and anal spines of a sunfish, about three inches long. There were also pieces of the shell of a crawfish. The absence of suckers (catostomids) was unexpected. Their pharyngeals would have been as easily picked out as those of the cyprinids, and supposing that their bottom habits protected them, then how about the crawfish?

Of the 113 minnow pharyngeals, 90 were identified as from the golden shiner (*Abramis crysoleucas*), 21, not satisfactorily determinable, were perhaps also this species, and two were from different individuals of the goldfish (*Carassius auratus*). That particular nest of kingfishers was then concerned with cyprinids, of which at a minimum estimate it accounted for 76 individuals, and of these the golden shiner made the greater part, probably almost the entire number.

The golden shiner is probably the most abundant fish in still and slow-moving fresh-waters near New York City, yet it would scarcely figure as largely in the kingfisher's bill of fare were there no discrimination in its favor. There is no obvious reason why the goldfish, which is also abundant, should not be as readily obtained. The writer suspects that the kingfisher selects that fish which in a given region furnishes it the best food supply, and specializes in the capture of the same disregarding other species. It would be interesting to learn if the many kingfishers which hunt over the salt and brackish waters near New York specialize on *Menidia* or *Fundulus*.

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THE TRANSFORMATION OF SPELERPES RUBER (DAUDIN).

Various allusions in literature to the life history of *Spelerpes ruber* as being well known, (though I have been unable to find any published account of